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## ABSTRACT

Four groups of people were requested to review the Rand Corporation's design for a longitudinal study of school desegregation. These groups can be labeled as Desegregation and Minority Student Education Experts, Distinguished Social Scientists, Federal Officials Responsible for Desegregation Research, and U.S. Commission on Civil Rights (USCCR) Staff Members. In late August, 1974, letters were sent to prospective reviewers asking them to participate. Twenty-two of the 25 prospective reviewers outside of USCCR agreed. Nineteen of the 22 outside reviewers submitted comments. One additional outside reviewer was contacted and submitted his comments. This summary is based on the feedback provided by those 26 reviewers. When the study design documents were sent to the reviewers, an evaluation questionnaire was attached. The reviewers were asked to answer the 27 multiple choice questions, to add any needed clarifying comments in the spaces provided after each question, and to write up to six single spaced typed pages of additional comments addressing any issues they thought to be important. The responses of each respondent to the 27 questions are given, as are the average rating for each reviewer, for each group, and for all groups together. Those results are briefly discussed and then the narrative comments made by each reviewer are summarized. (Author/JM)

Summary of Reviewers Comments  
prepared by  
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U. S. Commission on Civil Rights  
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INTRODUCTION

Four groups of people were requested to review the Rand Corporation's design for a longitudinal study of school desegregation. These groups can be labeled as Desegregation and Minority Student Education Experts, Distinguished Social Scientists, Federal Officials Responsible for Desegregation Research, and U. S. Commission on Civil Rights (USCCR) Staff Members. These will be referred to in this discussion as groups I to IV, respectively.

In late August, 1974, letters were sent to prospective reviewers asking them to participate in the review of the Rand study design. It was explained that the task would probably take about 3 full days of work, and persons who were not employees of the Federal Government were offered \$400 in remuneration. Twenty-two of the 25 prospective reviewers outside of USCCR agreed to try to find the time to review the documents. They were mailed the document on September 6, and asked to return their comments by October 3. Nineteen of the 22 outside reviewers returned comments, as did 6 USCCR staff members. One additional outside reviewer was contacted about a month later and later submitted his comments. This summary is based on the feedback provided by those 26 reviewers.

At the time of the initial invitation, each prospective reviewer had been sent a brief history of the events which led USCCR to contract with Rand for the development of this study design, and of the feedback given to Rand by various review panels and the USCCR staff over the course of the design development.

When the study design documents were sent to the reviewers, an evaluation questionnaire was attached. The reviewers were asked to answer the 27 multiple choice questions (see attachment A), to add any needed clarifying comments in the spaces provided after each question, and to write up to 6 pages (single spaced typing) of additional comments addressing any issues they thought to be important.

The responses of each respondent to the 27 questions are given in attachment B. The average rating for each reviewer, for each group, and for all groups together, are given in attachment C. Those results will be briefly discussed below and then the narrative comments made by each reviewer will be summarized.

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Before discussing the responses to the multiple choice evaluation questionnaire there is an important consideration which needs to be noted. The questionnaire asked the reviewers to evaluate various aspects of the study design on a four point scale from quite good to quite poor, but did not suggest a standard against which this judgment should be made. It appears that three different standards were used: 1) the level of quality generally manifest by previous desegregation research, 2) the level of quality which is possible, given the present state of the art in respect to social science evaluations, and 3) the level of quality necessary for making unambiguous inferences for at least some important, coherent sets of policy relevant questions. These standards are increasingly severe, and any person who primarily relied on the first one would certainly have rated the design much higher than if using the third one. It might have been possible and desirable to ask all reviewers to use the same standard, but this did not occur to the staff at the time the evaluation questionnaire was written. In any case, it is safe to say that if the reviewers had been asked to rely primarily on the first standard the ratings would have been higher (but to an unknown extent) than they are, and if the reviewers had been asked to use the third standard the ratings would be lower (but also to an unknown extent). It appears from the written comments that most reviewers relied primarily on the second standard, and that the other two standards were each used by a few of the reviewers.

#### RESULTS OF THE EVALUATIVE QUESTIONNAIRE

For purposes of tabulation, the four possible ratings were coded as follows: "quite good" as 1.0, "moderately good" as 2.0, "moderately poor" as 3.0, "quite poor" as 4.0. The overall average rating was 2.38, somewhat below "moderately good", but slightly above the midpoint in the rating scale. The average rating of the most favorable reviewer was 1.3, and was 3.5 for the least favorable reviewer.

The most favorable ratings were given to the following factors: how well the design makes use of previous school desegregation research, the feasibility of implementing the non-experimental design option, and the ethicalness of both design options. The least favorable ratings were in respect to: how well the design states questions or hypotheses specifically enough to be effectively and efficiently researched, the feasibility of implementing the experimental design option, the apparent likelihood of the instruments yielding valid measures of the variables of interest in the study, and the extent to which the instruments cover an appropriate set of behavioral variables.

There are some differences between the 4 groups of reviewers. The Distinguished Social Scientists gave the design the highest average rating (1.96) and the USCCR Staff gave it the lowest average rating (2.82). The Federal Officials responsible for Desegregation Research and the Desegregation and Minority Student Education Experts were in the middle with average ratings of 2.48 and 2.66 respectively.

It should be noted that these are unweighted averages and thus presume that each question is as important as all others and that each person was equally competent and careful in answering those questions for which they indicated a rating. This probably is not entirely true, but any system of weights would involve other presumptions which also would be questionable.

Only 7 of the 26 reviewers suggested that USCCR directly proceed with soliciting funding for the study design. The rest thought that the proposed design should at least be field tested before funding is sought, and most suggested substantial revisions be made before the field testing. It is very important to note that all but one of the reviewers who recommended that USCCR proceed directly to solicit funding also strongly suggested subsequent field testing and revisions prior to field testing. Thus, almost all reviewers urged revisions and field testing before implementing the study, and more than two-thirds of them thought this should be done prior to seeking the commitment of funding. The view of the majority of the reviewers may reflect pessimism about the likely results of the field testing, or it may reflect other considerations.

#### NARRATIVE COMMENTS

The following excerpts were selected to reflect each reviewer's opinions, focusing primarily on those comments to which they give the most emphasis and which are not clearly indicated by their rating of the study design. Some additional comments have been excerpted which make important but not particularly emphasized points; these will be preceded by [N.E.]. Specific suggestions for improvements will be excluded, but not comments about the need, or lack thereof, for improvements, or the ease or difficulty of making improvements.

A summary of the narrative comments is: most reviewers felt this design was an improvement over previous desegregation research, almost all felt that there were many aspects which could be improved, and some felt that even if the design is improved substantially it will not be as useful for policy decision making as implied by its authors.

#### DESEGREGATION AND MINORITY STUDENT EDUCATION EXPERTS:

##### FAIRFAX

"The Design which has been presented to the Commission is essentially a study of biracialism in public elementary and secondary schools and is not a study of desegregation. In its present form, it would compound the current confusion surrounding an historic, internationally significant and highly misunderstood phenomenon and will not contribute to the enlightenment of our citizenry, which is so desperately needed."

"The so-called desegregated schools to be studied include what appear to me to be: (1) biracial schools in districts which may still be segregated by current legal standards, (2) biracial schools in desegregating districts which may or may not be desegregating under plans which meet minimum court standards, (3) biracial schools in desegregated districts."

"The phenomenon to be studied should be the desegregated district (because that is the unit which the courts deal with and the design should define as 'desegregated' schools only those which are in desegregated districts). I would not oppose studying segregated schools in segregated districts or segregated schools in desegregating districts, but they should be clearly identified as such. If the design studies biracial schools in districts which are not desegregated and calls them desegregated, it will compound the current confusion."

#### FOSTER

"The greatest weakness of the methodology lies in the instrumentation. Hundreds of unvalidated items are proposed, ranging from Likert scales to nominal scaling of obviously continuous constructs (e.g., the dichotomous scaling of attitudes). Do the items conform to the APA guidelines? What formal steps have been taken to validate them? When the same instruments are used with different racial and ethnic groups, it is important to illustrate that factor patterns are similar across groups. No mention of any such intent has been made. With such a mixed bag of instruments it is critical that pilot work be incorporated."

"Comparing segregated and desegregated schools on the 'impact of desegregation' is an idle dream. Defining a segregated school as over 90 or under 25 percent white is (admittedly) arbitrary, but it is more serious than that. It is completely crazy. A school can only be defined as segregated or desegregated in the context of the school district of which it is a component part. Research that does otherwise immediately misses the point."

"Abandon efforts to develop a study that will influence public policy. The latter is not based on social science research nor are the courts apt to be influenced to any great extent by such results. Furthermore, there will never be any research agreement anyway on policy matters."

"Initiate a needs assessment' from potential research consumers. There is little point in spending all this money unless there are a substantial number of serious consumers who have a problem."

#### WATSON

"In general, I think the proposal is a sound one; it does need consistent and effective monitoring and will probably require intervention by the Civil Rights Commission as the study proceeds."

"I would strongly recommend that the staffing of the research team include blacks and Spanish-speaking people, both Puerto Rican and Mexican Americans. Unlike Rand's recommendation, I would strongly urge that written questionnaires be prepared in Spanish as well as English."

"I seriously question some of the assumptions and conclusions Rand made about the attitudes and beliefs of Spanish-speaking people."

MERCER

"A tremendous amount of work has obviously gone into the proposal and it is greatly improved since last spring. The design is clearly specified and coherent."

"My reactions are spelled out on the accompanying sheets which are general responses to the questions with additional comments. The design is very sophisticated but I still do not believe that a survey approach will provide any definitive answers to the critical questions about the processes which characterize effective desegregated schools. My vote would be to cut out all the peripheral studies which make the proposed 'projects' an administrative monstrosity and zero in on developing more fully the experimental design which the Rand people themselves present as their preferred option."

"The experimental design would need further work to develop the details. This was probably not done because the Rand people saw little possibility of that design being funded. In my opinion, it would be feasible. Multi-racial schools are anxious to try promising new programs."

[ N. E. ] "My own experience with a small data file of about 200 desegregated schools suggests that there is so little 'between school' variance in programs and it is so difficult to ascertain what programs, if any, a school is actually implementing that there are almost no 'relatively unambiguous answers to some questions' which are likely to emerge from the non-experimental design option."

"The response could be even worse than Coleman had. The climate of opinion about research has changed since his study and educators and citizens in desegregated districts are particularly wary of anything that will make waves. I personally believe it is possible to secure cooperation, but it takes work, work, work!"

[ N. E. ] "The tests are very short and no information is given about them. For example, the rank ordering of ethnic pictures, a measure used in the Riverside study, creates many problems in scoring and I would not recommend its use in a larger study in the format used in Riverside. To rank one's own group high, one must rank other groups low."

C. H. SMITH

"We are in a period now where there is much resistance to some of the types of questions posed in the various instruments."

"My overall reaction to the focus of the design is negative. I find it difficult to reconcile the Commission on Civil Rights spending the bulk of \$9 - \$14 million for a series of studies to ascertain if the law of the land (i.e., desegregation) is working rather than spending this amount for studies which would show it can be made to work."

"Another major objection is the omission of any major consideration of the push-out problem, majority group violence against the minority group, or firing of minority staff."

"The promise to provide the new data to other researchers and scholars is excellent, and I hope this will be made a part of the formal contract. Also, the fact that the Commission may at any time intervene in the conduct of the study is good. I hope that the Commission will provide sufficient monitoring staff to really stay on top of the various studies."

"I would also add that any policy task force assembled to oversee this study should have adequate representation."

#### DISTINGUISHED SOCIAL SCIENTISTS:

TYLER

"Hence, the evaluation of desegregated schools in terms of the extent to which children are learning what they are being taught in school cannot be done by currently published achievement tests. New instruments are necessary."

"I doubt the feasibility of random assignments of school innovations."

"A second major comment on the instruments is the number of questions included that state laws in California, and perhaps in other states, prohibit asking on the grounds of invasion of privacy. Where state laws may not prohibit asking these questions, many schools regulations or tacit policies effectively prohibit them. This issue should be dealt with before the detailed research plan is approved. Among the kinds of prohibited questions are: how the child feels toward other children or adults; items about family wealth or poverty, such as appliances in the home, autos owned, whether the man in the house is the child's father; questions about the attitudes of parents; etc."

## AHMANN

"One does not over-simplify the primary purpose of the research design by stating that it is focused on the generation of data for policy makers. This point is emphasized repeatedly and is to be commended. In contrast, however, one finds that no clear statement is included in the research design with regard to the questions which policy makers wish to answer. Questions proposed are evidently hypothetical ones based upon an intelligent review of the state of the matter today insofar as desegregation of schools is concerned."

"Evaluative research will succeed if it is based upon the questions raised by the users of the data rather than the questions raised by those who propose to produce data."

"Evidently the instruments to be used in the cognitive domain will be the traditional standardized achievement tests. Attention should be given to the question of objective-referenced and criterion-referenced tests as used so frequently in areas like the National Assessment of Educational Progress. Furthermore, the definitions of achievement should be broadened to be sure that areas other than the basic skills are brought into play."

[N. E.] "Those who design the study tread rather freely, and in my judgment, rather carelessly over a number of psychometric problems when designing the proposed instruments to be used. Under no circumstances should these instruments be used without careful pretesting coupled with item analysis and associated reliability and validity investigation."

## CRONBACH

"You will see that I have a definitely favorable opinion as to the value of the screener study, the intensive case studies, and the intensive study of the newly desegregated schools. I am firmly opposed to the experimental study. With regard to the 'longitudinal' and 'student' panel studies the technical issue of the adequacy of the matching scheme weighs very heavily in my thinking. I judge Kand to be wrong, but I am sure that this is an area where they have qualified staff and the difference between us probably needs further thought to figure out just why we are so divergent. I certainly am not prepared to endorse those studies as presently designed."

"The most troublesome issue, in the sense that much hangs on it and that the pro-and-con arguments are hard to organize, is the 'quartet' design. If that is as vulnerable, as I think it is, almost all the other technical decisions have to be reworked, assuming that this program of quantitative studies is to be mounted at all. As I see it, it is inappropriate to mount a grand pseudo-controlled study unless we have confidence that rigorous inference is indeed possible. I do not think that one can make a rigorous inference about the impact of a certain type of desegregation, in a certain category of school systems, unless the sample is truly representative of that category and of that type. The attempt at post hoc matching seems to me to guarantee that samples are not representative of categories. This threat to inference would not be serious if one could make the assumption that the basis for matching (essentially, geographical contiguity and comparability of demography in census tract) accounts for all (or nearly all) of the causally relevant variance. But there are community characteristics and political events that caused one neighborhood to desegregate while the second neighborhood did not, or that caused the adoption of different plans. The system of matching does nothing to account for these antecedents, and so all comparisons are ambiguous."

"The second pervasive issue is the attempt to generalize over ill-defined 'types,' under the assumption that a gross label characterizes a useful treatment variable that could be written into a policy recommendation. It may be, for example, that 'voluntary' desegregation plans differ so radically among themselves that an attempt to generalize over that range is inappropriate. Certainly it is true that 'schools with a high degree of parent involvement' may have considerable dissimilarity in the character and motivation of that involvement. I remark elsewhere on 'bilingual-bicultural' and 'extracurricular program' as labels that imply a homogeneity and hence a causal relevance that probably will not actually be found."

"As usual in this document, the section on analysis is superficial and injudicious."

[ N. E.] "The sample of some 200 districts is large enough to assess overall zero-order correlations with enough precision. As we move into multiple regression and path analysis we become shakier. Also, if we entertain the idea of different regressions within the subject that had court-ordered desegregation--and we had better--we drop down into a sample size where the signal-to-noise ratio is distressing."

M. B. SMITH

"This comes to a very major issue that I didn't touch on in the questionnaire--the whole matter of research management, which becomes crucial in an undertaking as large scale and as interconnected as is being proposed. I really think there is no precedent in the applied social sciences. I very much like the idea of data collection by one major experienced contractor, with separate contracts for analysis and provision for a good deal of free-lancing using the data bank. But the problems of coordination are immense, and there are serious blocks against getting the most competent minds to work on contract on somebody else's plan. How this is done will make all the difference, as to whether these splendid pieces of paper are justified in their large claim on public funds."

"It seems to me crucial that the Rand group who conceived the project be the management team to hold it together--given their thought and investment in the enterprise, no one else could do it as well. To expect another equally competent group to do it would be disastrous, unless they had an expensive (and inefficient) free hand to redesign it to their taste."

[ N. E.] "See my partly disqualifying comment above. My main worry, that I could not adequately dispell on the basis of the document, has to do with whether the quartets of matched schools so crucial to the design can actually be found (according to specifications), and their cooperation secured. I would want more assurance on this point, drawing on more expert opinion than mine, before going ahead. This seems to me the crucial point in evaluating feasibility."

[ N. E.] "A major technique relied on to assess intergroup attitudes of children--the pictures test--worries me. Such a test has been often and appropriately used with Negro and white stimuli. But how to represent Puerto Rican and Mexican-American children unambiguously without inappropriate stereotyping in the pictures? Puerto Ricans aren't racially homogeneous or necessarily distinctive; likewise Mexican-Americans. Giving names might help, but doesn't really solve things (though presumably there won't be major Mexican and Puerto Rican minorities in the same schools). This needs to be rethought before pretest, and carefully pretested."

ROSENSHINE

"The message I send is that you cannot expect definitive answers from an exploratory study. The major problem is instrumentation, and most of the instruments in this study are exploratory because they have either not been used before or have been used in one or two studies with varied results."

"I do not recommend going immediately into such a study unless there is a possibility of differential outcomes. That is, if one can expect that the pretests (across schools and school districts) will probably account for 90 percent of posttest variance (certainly probably on the cognitive measures) or more, then there is little room for school policies and practices to account for the remaining variance, or, differences between schools will be miniscule.

"Expressing things as regression coefficients does not relieve the problem of size of effect. Unless there is good reason to believe that there will be effects, I see no reason to begin."

"I think the form of this survey is excellent; I think that the substance--expressed as questionnaires, outcome measures, interviews, and hypotheses--is weak. (Examples of weak substance are the student questionnaires on individualization or the self-concept tests--both of which don't represent the best guesses of scholars in the field. Nowhere is there the detailed support for instruments that is given for design)."

"I claim that the substance is not yet ready, and it is naive to initiate this study with such inadequate substance."

"The analysis of problems in using the achievement measures (pgs. 158+) is excellent. NB: If all these difficulties exist with achievement tests, they exist even more fully in the unexplored area of non-cognitive tests. How, then, can one justify selection of non-cognitive tests which have usually been used in a single study? The non-cognitive measures are not ready, to date."

"Before one invests one million (to say nothing of ten) in this experimental design, one would like some reasonable assurance that the results will have meaning. However, the results to date on research such as this are not promising."

"The research on 'it works'--AIR's study of successful school innovations has been that innovations are seldom successful across two or more years. Why they are not successful is unknown."

"The variables to be studied--multiethnic curriculum, individualism, and school activities are extremely questionable as appropriate exemplars of 'successful.' Furthermore, the methods for studying these are poor--multiethnic seems nothing more than having minorities represented in textbooks; individualization means ability to move around the room. The literature must be richer than that in identifying characteristics of successful schools--if it isn't, forget the study."

## ASTIN

"It was somewhat difficult to evaluate the appropriateness of the research design because the general goals of the study are not entirely clear."

"One area of possible significance which gets virtually no attention in either the theoretical treatment or the instruments is the impact of desegregation on the peer group behavior of young adults. One very important area of peer group behavior is dating."

"Another problem is the obvious racial stereotyping that students are encouraged to engage in. Again, there must be a more subtle way to get at stereotypes rather than asking students to respond yes or no to the question, 'Are they dumb?'"

"In looking over the instruments for school personnel, I find that many of the items designed to get at racial attitudes or attitudes toward desegregation are much too transparent. Again, some care should be devoted to attempting to phrase items in more reasonable terms and to uncover more subtle differences in attitudes than could possibly be revealed by such obvious questions. In short, I would suggest a very careful review of such items by people experienced in developing measures of attitudes."

## DEUTSCH

"I have serious doubts about the political and ethical feasibility of such research. There has been much resistance from schools and parents to questionnaires which contain items dealing with racial attitudes."

While this resistance may be poorly conceived and short-sighted, it exists nevertheless; such resistance would seriously interfere with the possibility of implementing the proposed study designs. If this study is conducted under governmental regulations which require 'informed consent' of the students (or of their parents) and of others who are to answer questionnaires, I suspect that the refusal rate would be high. With these problems in mind, I suggest that it might be advisable to conduct a feasibility study to determine how much cooperation from schools and parents is likely, before going ahead with the studies proposed."

"The knowledgeability and technical competence of the authors of the proposal are impressively high. The proposal, however, suffers from an ambiguity with regard to the policy questions to which it is addressing itself. The proposed research is very much concerned with trying to formulate the policy questions as well as trying to find the answers. My own preference would have been to separate more sharply the formulating stage and the answering stage. Thus, I think it would be helpful to start the research with a series of surveys of relevant categories of 'policy makers'--federal judges, city officials, school

boards, school principals, teachers, parents, interested civic groups, etc.--which would try to identify the specific questions most salient for each category. I am confident that the proposed research will answer many of the questions that such categories of people might want answered, yet it would be reassuring to know in advance that the research is addressed to questions that the potential users of the research are concerned about."

#### MERTON

"Nevertheless, the record is reasonably clear that the COLEMAN REPORT did not have direct, official and therefore readily visible effects on the formation of comprehensive policy dealing with educational opportunity."

"...the authors of RAND DESIGN assume that the absence of significant official use of the COLEMAN REPORT is wholly or mostly the result of limitations and inadequacies in the research design and execution. ...I happen to think that...it is not the case that 'good research' leads directly to 'good public policy.'"

"In any case, when the question is raised as to whether RAND DESIGN can be expected to yield 'relatively unambiguous answers' to 'some coherent sets of important policy questions about school desegregation,' this seems to me to underestimate the gap between social research findings and policy formation."

"One major source of that gap is the multiplicity of consequences of any public policy for the diverse sectors and groups in a complex society. It is the rare situation in which a proposed policy can be shown to benefit all sectors and groups and to do so equally or at least equitably, as seen from the perspectives of these diversely affected components in the population. In short, the formation of public policy is inescapably a part of the political process. That means that diverse group interests, values and belief-systems will affect (1) the reading of the so-called 'relatively unambiguous answers' and, even more, (2) the policy-inferences to be drawn from the information."

"That gap is there even in the case where the research is quite unambiguous. But even the most optimistic of social researchers can scarcely describe the massive array of research studies incorporated in RAND DESIGN as apt to lead to thoroughly unambiguous results. The great bulk of results--even in the proposed experimental part of RAND DESIGN--are bound to be of a kind allowing for diverse interpretations so far as implications for policy are concerned."

"In suggesting all this, I am not downgrading the hard thinking that went into RAND DESIGN. I am suggesting that its authors (and perhaps the Commission on Civil Rights itself) may have an overly optimistic image of the connections between social research results and large-scale public policy."

"In short, I suggest that at the best, this research program will provide findings, ideas and tentative interpretations which can be taken into account and turned to account by the diverse groups and interests most directly concerned with school desegregation; that local policies will be far more influenced by these concerned groups than by the inferences drawn from the research by social scientists or by policy-makers in Washington; that all manner of 'concessions', 'compromises' and 'adaptations' of conclusions drawn from the 'policy-relevant research' will occur during the political process; and it would be unwise to get up one's hopes that unequivocal research findings will yield unequivocal policies that will be adopted and translated into practice. If these more modest aspirations are what the Commission on Civil Rights has adopted for the proposed research program, then this will not be still another disappointment for those who had persuaded themselves that solid research findings will lead to indicated policies and that implementing these policies will in turn lead primarily or only to desired consequences."

#### PETTIGREW

"The strongest part of the proposal is its conception of a basic data bank from which a variety of studies by numerous investigators could be spun-off. This idea is a widely shared one now in the social science community, for we have learned from our mistakes of the past two decades that countless little studies, each with their own too-small data bases and unique instruments, do not add up to what the nation needs and rightfully should expect of its investment in social research."

"The next strongest part of this report is its emphasis on process. This is a favorite emphasis of mine over the past decade of writing on the subject, so I naturally think it is long overdue. Indeed, my reservations about the design have to do chiefly with the fact that the report does not wholeheartedly devote itself to process, but insists on retaining aspects of the old Coleman Report emphasis on achievement scores comparing desegregated with segregated schools either at one point in time or over a too-short period of one year. At many points the report rightfully and persuasively argues against this focus of the past; yet it nevertheless builds in a dubious type of sampling for segregated schools and calls for one-year sample achievement effect results of desegregation vs. segregation before the basic process data are developed to serve as mediators of the effects in the analysis. My major recommendations for change involve the removal of this repetition of a strategy that we know leads to confusion and policy irrelevant findings."

"Finally, in the interest of coordinating this effort with previous and current work in the area, I believe more explicit attention should be paid, i. e., to the repetition of successful items in other studies (some of this may well have been done, but is not indicated in the report)."

WILSON

"I am strongly in favor of this proposal: a good longitudinal study is much overdue; Crain and his colleagues at Rand are well-qualified to carry it out. I very much hope the experimental option will be retained."

"I have one suggestion for modifying the design. Almost all extant research on this subject, and the present design, involve the collection of individualistic data by questionnaires or interviews aimed at single respondents. Such an approach will miss the interaction effects of people responding to each other in integrated and non-integrated settings."

"I propose that in a significant number of schools, an interviewer be assigned the task of meeting with small groups of all-white, all-minority, and integrated pupils to discuss with them their attitudes toward learning, the school, each other, and non-members of the group (especially non-members of different races and cultures). The groups should be 'natural' groups--i.e., actual peer groups or play groups. Strict sampling procedures are not vital nor is precise coding of all responses. The object would be to get the groups to explain their feelings and actions about and toward the schools and other pupils."

FEDERAL OFFICIALS RESPONSIBLE FOR DESEGREGATION RESEARCH:

RIST

"I think one of the most basic issues of the entire report is an epistemological one, that of defining terms and defining problems. Many important terms like 'desegregation' or 'segregation' are treated as statistical realities, regardless of whether in the context of the actual school settings, the interpretation might be different. Statistical realities are not always cultural realities and this report does not take account of this possibility."

"Finally, I think there is a hiatus between the expressed goals of the research and the methodology set up to gain answers so as to achieve them. If one wishes to find ways so as to improve integration in American society, then that is a very different topic than learning how well it is or is not doing with respect to segregation. The research may be able to answer the latter, but cannot as presently organized answer the former. I think it is also a critical

question as to whether we should spend 15 million to find out the answer to the latter. I am not sure with the 'grab bag' approach to the collection of data that one will necessarily find in all of it the keys to unlock how to improve the current situation. The brief mention of locating schools that are doing well and studying them will not help if the questions are kept the same and the approach is still one of comparison to segregated education. It is one thing to collect much data that will be interesting, it is another to address oneself to issues of social change and how that change can be enhanced in what one believes is a constructive direction."

"It is as if we were out to again discover the wheel. There appears to be little sensitivity to much of the present research, particularly at the classroom level, on both cognitive and non-cognitive outcomes of desegregation. An alternative strategy would be to build on what we now know."

#### YORK

"In the ETS study we emphasized successful outputs in developing the RFP, in part because of the weak program effects found in the NORC report. The intent was to find good candidate exemplary desegregated schools based on output measures (statistical adjustments for SES differences, etc.) and then conduct a crass empirical approach to find the causes of success (broadly classified as specific programs and/or school practices and policies). This seems to me to be a more productive approach than Rand proposes. The fact that we are having problems in finding stable exemplary desegregated schools based on outcomes suggests that you might have similar difficulties if you should use our type of approach, but the Rand approach would seem to make these problems even more serious and more likely. The difficulties in finding stable successful schools should not be surprising to Rand after they published the excellent piece by Klitgaard, A Statistical Search for Unusually Effective Schools."

"It has been our experience that colinearity problems in educational research are so widespread that they will raise serious analytical problems even in the best experimental or quasi-experimental design that Rand is likely to be able to produce. I don't intend this as a surrender but as a sign that any RFPs issued should emphasize analyses methods for dealing with these problems."

"A different type of problem is the one created by excessive data collection burdens on the schools. School district resistance has been growing over the years although we have taken several steps that seem to be helping to reduce the problem. However, the Rand basic study plus the supplementary studies will pose a pretty substantial burden on many of the 1,600 schools. Since the sample design includes several schools per district (and should, to reduce noise for the statistician if not for others involved) the probability of a district facing an especially heavy data collection burden in at least one school looks very high."

"It seems to me that one contractor--the data collection contractor--should be either a prime contractor or have any coordinating and conference scheduling responsibilities for all contractors that are not the responsibility of the government. A separate 'management group' contract (II, p. 221) seems to create an extra bureaucratic layer and lessen the authority of the data collection contractor (who must be able to exert strong direct pressure for delivery of instruments on time and in a format consistent with the overall data collection and data processing specifications) and interfere with whatever government monitoring procedure is developed."

LUCAS

"One important set of policy variables is systematically neglected--these are cost variables--innovative programs, training, public relations, etc., costs \$. Moreover intra-school budget decisions may make a difference-e.g., how modern and complete is equipment in the chemistry department. Also, one variable which performed in the Coleman study--Teacher verbal and other skills - is missing."

"Budget decisions are important policy instruments. No decision maker is likely to act on recommendations for program changes to make integration work without knowing (a) how much these cost on the average (b) the threshold of investment required to make the programs meaningful."

"It takes inadequate account of the evidence that situational constraints rather than attitudes seem to predict (1) the move from desegregation to integration and (2) subsequent changes in attitudes. Coercion, financial incentives and financial constraints (e.g., on white flight) are neglected."

M. SMITH

"Concentrate on socio-political analyses of how to make desegregation work peacefully. Almost all the work on how to make a 'desegregated' school into an 'integrated' school is poor."

"Another modified planned variations design is fine in principal but a disaster in practice until we learn something more about how children learn and behave in schools. To suggest, for example, that 'individualized instruction' is a single coherent approach is very naive."

"Your costs will be much greater than Rand estimates if you carry out the whole study--get your estimates from Follow-Through evaluation rather than from the EEOS and related studies (you might check with Carl Wisler or John Evans)."

Figure out precisely which policy questions you wish to answer from the Federal level, for the State level and for the local level. Generally, I suspect those questions need only descriptive studies to provide answers--not studies designed to answer causal connections."

LOHMAN

"I found myself thinking, as I tried to absorb the meaning of 900 pages of print, that if the Civil Rights Commission is willing to accept the Rand perspective in approaching desegregation as a phenomena of study, and if they can support the general methods proposed to study this issue, then at least 70 percent of the studies should be considered worthwhile to support."

"On the other hand, if you formulate the desegregation issue with a different set of assumptions than those adopted by the Rand team--a different set of studies and priorities will emerge, and only ten percent of the Rand design would be useful. In short, if the second view is adopted a new team would have to start again."

"How does one describe these two different approaches, and what is my recommendation?"

"Position A--Desegregation as a social science problem worthy of scientific analysis and carefully controlled experiments."

"Position B--Integration as a desirable goal to achieve in American Education."

"It should be apparent that strategy A represents the approach adopted by the Rand research team. It is a respectable strategy for understanding what the current national experience with desegregation is like. But it will offer very few, if any, solutions to the problems--multiple and diverse--which are faced by school districts across the country. Strategy B focuses upon finding solutions to problems. Its answers will rarely be universal in application; and it will necessarily be selective about what problems it can reasonably offer any quick answers to in the next six years."

"If the Commissioners are willing to accept strategy A, then they should accept the Rand design--if they accept strategy B, then they should reject the Rand design. It's that simple."

NOTE: On the evaluation questions #1 to #9, Dr. Lohman rated the design twice, once in respect to "position A" and once in respect to "position B". The averages of the two ratings were used for the ratings shown in attachments B and C; Dr. Lohman rated position A one-half to one full rating above the average rating which I have indicated for these questions, and rated position B one full rating below the indicated rating.

#### MORNELL

"Given this overwhelming document, it is important not to lose sight of the simple questions with which this evaluation must be concerned:

1. To what extent is the design as a whole appropriate to the intent of the U. S. Commission on Civil Rights?
2. To what extent is the design as a whole efficient, realistic, and likely to achieve significant results?

"The design basically proposes a massive data bank from which social scientists with a multitude of interests will draw in their efforts to develop significant conclusions. To make the bank as inclusive as possible, no variable, hypothesis, or question which might be related to desegregation knowingly has been excluded. Further, several different research techniques have been proposed, although survey research obviously is dominant."

"The result of this approach is a proposal that touches upon 'everything' in the field of school desegregation, with little effort to state biases clearly, define precise objectives, and develop specific hypotheses or models. (The 'analytic models' which appear as part of the design are, in fact, no more than tables of possible relationships between variables which are to be correlated.) However, this attempt to be 'objective' is often contradicted by the value-laden statements which appear throughout the paper, leaving the impression that the design is a political document intended to appeal to the many points of view on desegregation and the many interests of research scientists and funding agencies."

"This approach is justified by the stated assumption that there is little agreement as to which policy issues are most important--an assumption which is clearly false, especially as far as the Commission is concerned. It is also based on the stated assumption that no single study could succeed in settling the outstanding policy issues--an assumption which is clearly true if the first assumption determines the design. However, even given these assumptions and this design, there is no way to predict

if the study will lead to such conclusions. A greater possibility is that the study will lead to a host of inconclusive, contradictory, and insignificant findings, many of which may be used to attack desegregation."

#### LYONS

"Although Commission staff and consultants repeatedly emphasized the need to analyze the racial composition of educational personnel within school districts and individual schools, and its effect on the various school outcome criteria, the final design virtually ignores this critical matter. This omission is appalling. School desegregation literature is replete with theoretical assumptions and research findings pertaining to the effect of staff racial composition on education and race relations. Moreover, the problem of demotion and dismissal of minority teachers and administrators in some desegregating districts is of grave concern to the civil rights community."

"This omission cannot be cured adequately by 'quick and dirty' additions to existing instruments. The determination of data needs and the methods to be employed in securing necessary data should follow; 1) a survey of existing research and data resources, 2) conceptualization of probable relationships between staff racial composition and key educational and race relations variables in the overlapping systems of school and community, and 3) formulation of testable policy-relevant research hypotheses."

"Another major problem of the design is the lack of attention given to the matter of school discipline. Discipline is a critical concern of white and minority parents, of tax-paying citizens, and of students and school personnel alike. Discipline is significant not only because it is controversial, but also because it strategically affects the full range of educational processes and outcomes encompassed by the design.... The design is mute on such obviously important subjects as student suspensions and expulsions, the character and nature of discipline codes, and the manner in which they are enforced."

"Another major shortcoming of the design is the failure to specify linkages between the major studies and the substudies envisaged. The contractor often refers to the survey data base as the resource for validating potential findings of specific substudies. Such references are casual if not cavalier, and largely ignore the critical questions of data comparability and control."

## FEAGIN

"The proposal is particularly weak in two ways: (1) it does not make clear the problem of defining and studying 'desegregated' schools, some of which are desegregated because they are in a fringe area, some because they are token schools in a generally segregated school district, and some because they are in completely desegregated districts; (2) it does not focus on classroom interaction."

"More attention to the issue of 'desegregated' schools. How many are there? What categories do they fall into? Are there enough truly desegregated districts for an adequate sample? More attention to the timing issue. What does it mean to come into the desegregation process at various points in time?"

"Again, some very important questions have been slighted. But some important policy questions will receive attention."

## ORFIELD

"I doubt that any study could provide unambiguous answers [to policy questions]. The benefits will probably come from a more adequate understanding of the process, an indication of clearly useless strategies and some general showing of areas of possible high return."

"[There is a need for:] a more competent section on Chicano and Puerto Rican educational problems and their interaction with desegregation--and development of appropriate instruments; a stronger concentration on elementary grades, with particular attention to impact of beginning school in desegregated or integrated settings--both in big study and in study of newly desegregated schools; a control group of segregated white schools in the quartets."

## SMYTHE

"My impression of the design is that it tries harder than it did at first, but is a remarkably weak piece of work for a final draft, even given the problems involved."

"Unfortunately, I have grave questions about the clarity and objectivity of the questions in Volume III. Fuzziness about the meaning of terms ('Race,' 'unfair'), definitions which conflict with normal usage ('How many brothers and sisters do you have? (count yourself)' '1, only me'), and answers not consistent with the questions ('Would you like to take... Spanish?' 'Yes, I do take...Spanish.') are only some of the problems."

"Unfortunately, there are so many cultural biases and insensitive expressions that there will be resentment of such questions as 'Are they dumb?' (Volume III, p. 43) in the absence of a corollary 'Are they smart?' or allusion to Orientals as 'Japanese' or 'Chinese' without adding 'American,' as well."

"Do careful case studies of several school systems, identifying the issues, procedures, community pressures, etc., as well as outcomes in terms of the objectives of the study. (Boston, Denver, Brunswick (Ga.), and Miami might be candidates.)"

JACKSON

"This design, in its present condition, is superior in many respects to any prior desegregation study; however, it is incomplete and unpolished, and will require a substantial amount of work before it is a state-of-the-art product. In addition, even if the design is improved as much as is possible, given our present level of social science research technology, there are a number of difficulties which will remain and which will preclude the making of many firm policy oriented inferences from any study of school desegregation."

"The most important correctable inadequacies of the design are: the failure to recommend suitable cognitive achievement tests and to measure a number of variables which are generally considered important in the comprehensive assessment of school desegregation (see Appendix A of my narrative comments); the lack of Spanish translations (which the Commission agreed to forego in this contract); a moderate number of questionnaire items which at least need to be reworded, if not reconceptualized, in order to be reliable and valid; inadequate sample sizes, and sample procedures which may be inappropriate for presently available statistical tools; incomplete instructions for the procedures to be used in administering the instruments; and some remaining omissions, in respect to the major educational concerns of blacks and Spanish origin people."

"If the above inadequacies are corrected, this study, and any other design, will still be seriously limited in making firm inferences about most of the policy relevant aspects of school desegregation."

"Discussion in volumes I and II of the Rand design clearly indicates non-experimental longitudinal designs are intrinsically quite limited in their ability to yield firm policy relevant inferences about complex phenomena."

"The most decisive statement about the inadequacies of a non-experimental longitudinal design is on page 157 of volume II, 'Many studies of the effects of school desegregation have been longitudinal, which does represent a considerable improvement in methodology over one-time cross-sectional studies such as the Coleman Report; however, the mere existence of a longitudinal study does not mean that problems of spuriousness or bias are solved, as indicated by the intense controversy over the effects of Headstart [which were assessed longitudinally].'"

"The Rand proposal strongly states the methodological superiority of an experimental design option."

"The proposal notes that an experimental design has been considered by many persons as socially or politically infeasible, but that these persons may be wrong. Though I agree that in theory the experimental design would be methodologically superior, I believe the Rand proposal overlooks two serious practical difficulties in implementing such a design for the purposes of this study. First, if the innovations to be tested are likely to work, they probably have to be much broader than 'individualized instruction,' 'human relations training,' or 'multicultural curriculum.' They probably will have to involve school practices related to student government, discipline, instructional modes and curriculum. Fewer schools are likely to agree to the random assignment of a broad intervention than are likely to agree to the random assignment of a narrow and discrete treatment. Second, in all field experiments and particularly in school experiments there is substantial difficulty in controlling the specified treatments. The broader the interventions, the more difficult the problem becomes. It is relatively simple to train teachers and principals to engage in a given set of practices, but it is almost impossible to assure that they will fairly consistently maintain those practices over the protracted period of time necessary to assess the slowly accumulating effects of schooling."

## CONCLUSIONS

The ratings given in the evaluation questionnaire, and the narrative comments provided by the reviewers suggest a wide spectrum of opinion about the Rand study design. Despite the fact that there are areas of clear disagreement, there are also areas of clear agreement. There is disagreement about whether the Commission should try to implement a study based on the Rand design; most of the reviewers believe that such a study would be of at least limited utility, but some believe it would be useless or even harmful to the USCCR's objectives for a nationwide study of school desegregation. There seems to be fairly strong agreement that the Rand study, and perhaps any feasible study, will not produce many unambiguous answers to important policy questions, but a majority of the reviewers also felt that such a study could provide more reliable answers than are presently available to some of those questions and would somewhat further our body of knowledge about desegregation and integration. There is unanimous agreement that revisions and additions are desirable before implementing the study, but some reviewers believed

extensive changes would be necessary and others felt only moderate changes were repeated by a substantial percentage of the reviewers, some were mentioned by only one or a couple of the reviewers, and a few were contradicted by the changes recommended by other reviewers. Almost all the reviewers endorsed the desirability of field testing the instruments before implementing any study, and more than two thirds felt this should be done prior to seeking funding for a full-scale implementation of the study.

## Attachment A Evaluation Questions

Below are a number of questions which we believe are important to consider when assessing the enclosed study design. Please use your best judgment to answer each question with the multiple choice scale which is provided; circle the choice which most closely represents your judgment. The space provided after each question is for any clarifying comments you wish to make; including comments about how to improve those aspects of the study design which you feel are inadequate.

1. How well does the study design focus on the issues and processes involved in school desegregation and integration which most importantly need to be researched for the purposes of sound policy making?
2. How well does the study design make use of relevant theory?
3. How well does the study design make use of previous school desegregation research?
4. How well does the study design avoid the pitfalls which were experienced by previous large scale education evaluation efforts (Project Talent, Equality of Educational Opportunity Survey, National Assessment of Education Progress, Headstart, Follow Through, etc.)?
5. How well does the study design address the major educational concerns of blacks, Mexican Americans, Puerto Ricans and Anglos?
6. How well does the study design state questions or hypotheses specifically enough to be effectively and efficiently researched?
7. How well does the non experimental design option provide for relatively unambiguous answers to at least some answers to at least some coherent sets of important policy questions about school desegregation?
8. How well does the experimental design option provide for relatively unambiguous answers to at least some answers to at least some coherent sets of important policy questions about desegregation?
9. How well can the study design accurately assess the impact of school desegregation if most of the schools in the sample remain segregated or desegregated for the duration of the study?

10. How well can a longitudinal study accurately assess the impact of school and community variables on students if these variables are not constant in each given school or community over the period of the study or if student mobility results in substantial changes to the student body over the period of the study?
11. Is the non experimental design option socially and politically feasible to implement?
12. Is the experimental design option socially and politically feasible to implement?
13. Is the non experimental design option ethical?
14. Is the experimental design option ethical?
15. Is there adequate rationale or justification for the sampling procedures recommended in this study design?
16. How well do the sampling procedures generally appear to provide needed sensitivity and freedom from biases?
17. Are the sizes of the various samples likely to be adequate, but not unnecessarily large, for the proposed analyses?
18. The 1966 Equality of Educational Opportunity Study (the "Coleman Report") was considered seriously flawed by many reviewers because of the poor response rate, particularly of high schools (only 39% of the sampled high schools cooperated sufficiently to be included in the analyses). How well does this study design provide mechanisms to avoid the repetition of this difficulty?
19. Are the items generally precise, complete, unloaded, and written at an appropriate level of vocabulary and syntax?
20. Do the instruments generally appear to be likely to yield reliable measures of the variables of interest in this study?
21. Do the instruments generally appear to be likely to yield valid measures of the variables of interest in this study?
22. How well do the instruments cover an appropriate set of academic or cognitive skills?
23. How well do the instruments cover an appropriate set of affective variables?
24. How well do the instruments cover an appropriate set of behavioral variables?

- 1 25. Do the instruments generally appear to be unobjectionable to the persons whose cooperation in administering and completing the instruments will be necessary?
26. Are there at least two measures for most of the constructs which are of primary importance to the study?

The possible response choices were:

quite well    moderately well    moderately poorly    quite poorly  
strongly agree    moderately agree    moderately disagree  
strongly disagree

27. Given your overall assessment of the research questions of interest and the present study design, which course of action best represents how you feel the Commission should proceed with the present study design?
  - a. Solicit funding for the non experimental design option
  - b. Solicit funding for the experimental design option
  - c. Pre-test the instruments, and delay a decision about implementing the study until the results of the pre-test are available
  - d. Engage in a substantial revision of the present study design and/or instruments before making a commitment to a pre-test
  - e. Abandon the present study design and develop a new one with the same or a similar focus, but with different procedures.
  - f. Abandon the present study design and develop a new one focusing on different aspects of school desegregation
  - g. Abandon all efforts to do a policy relevant study of school desegregation

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A number with a hat (^) over it indicates that the respondent did not select one of the four multiple choice responses available for the given question, but USCCR staff assigned such a response based upon the clarifying comments immediately following the question. A (X) indicates that the respondent did not select one of the four multiple choice responses for a given question and either did not provide clarifying comments immediately following the question or provided comments which indicated the respondent did not want to answer the question.

ATTACHMENT B (continued)

Group III

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Rist	3	4	4	1	3	4	2	2	4	2	3	2	2	2	2	2	2	4	2	1	3	3	2	3	3	3	
York	X																										
Lucas	4	2	3	1	3	3	1	X	2	2	2	X	2	2	2	1	2	3	1	2	3	2	1	3	2	2	a/d
M.S. Smith	2	2	2	3	X	2	4	3	4	3	2	2	1	1	2	X	X	2	2	2	3	3	4	3	2	2	d
Lohman	3	3	3	2	3	2	2	3	3	X	2	3	1	3	X	X	X	4	2	2	2	2	1	2	3	3	c/d
Group IV																											
Mornell	4	4	4	4	4	4	4	4	3	4	3	4	2	2	X	X	X	3	3	3	3	X	X	X	3	X	e/g
Lyons	4	3	3	4	4	4	4	4	4	4	2	3	4	4	4	4	4	4	2	3	3	4	2	3	4	2	f
Feagin	3	2	2	2	2	3	2	1	2	3	1	4	2	3	1	3	1	3	2	2	2	2	2	2	2	3	d
Orfield	1	1	2	2	2	X	X	X	2	2	2	2	1	1	2	2	X	X	2	2	2	1	1	2	2	3	c
Smythe	2	2	3	4	3	4	4	4	X	X	X	3	X	X	X	X	4	3	4	4	4	X	4	4	4	X	e/f
Jackson	3	2	3	2	3	3	3	2	2	3	2	2	2	2	2	2	3	3	3	3	3	4	2	2	3	2	c/g

## Attachment C

AVERAGE RATING AND RECOMMENDED COURSES OF ACTION OF EACH RESPONDENT

	<u>Average Rating</u>	<u>Recommended Courses of Action</u>	
I	J. Fairfax	X	
	G. Foster	3.1	d/g
	B. Watson	2.0	a/c
	C.H. Smith	3.0	f
	J. Mercer	2.5	c
			<u>Possible response Choices:</u>
II	R. Tyler	1.6	c
	S. Ahmann	2.0	c
	L. Cronback	2.5	d
	M.B. Smith	1.6	a
	B. Rosenshine	2.4	c/d
	A. Astin	2.5	b/d
	M. Deutsch	1.8	b
	R. Merton	2.2	c
	T. Pettigrew	1.8	a/b
	J.Q. Wilson	1.3	a/b
			1. quite well
			2. moderately well
			3. moderately poorly
			4. quite poorly
			Letter
			a. Solicit funding for the non experimental design option
			b. Solicit funding for the experimental design option
III	R. Rist	2.8	d
	R. York	X	
	T. Lucas	2.1	a/b
	M.S. Smith	2.5	d
	M. Lohman	2.5	c/d
			c. Pre-test the instruments, and delay a decision about implementing the study until the results of the pre-test are available
IV	G. Mornell	3.5	f/g
	J. Lyons	3.4	f
	J. Feagin	2.2	d
	G. Orfield	1.8	c
	M. Smythe	3.5	e/f
	G. Jackson	2.6	c/g
			d. Engage in a substantial revision of the present study design and/or instruments before making a commitment to a pre-test
			e. Abandon the present study design and develop a new one with the same or a similar focus, but with different procedures
			f. Abandon the present study design and develop a new one focusing on different aspects of schools desegre- gation
			g. Abandon all efforts to do a policy relevant study of school desegregation

ATTACHMENT C  
(continued)

AVERAGE RESPONSES TO EACH QUESTION BY GROUPS  
OF REVIEWERS AND FOR ALL REVIEWERS TOGETHER  
(revised 10/9/74)

		Questions																										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26 Group Averages	
Group I																												
2.0		3.0	1.5	2.3	3.0	3.0	3.0	3.5	2.5	3.3	3.0	2.0	3.0	2.0	2.5	2.3	2.5	2.1	3.0	3.5	2.8	3.0	3.0	3.0	2.3	2.8	2.0	2.66
II																												
1.8		1.9	1.2	2.1	1.8	2.2	1.9	2.0	2.7	2.3	1.8	2.4	1.1	1.6	2.1	1.9	2.1	2.0	1.8	1.8	2.1	2.0	2.1	2.6	2.0	1.9	1.96	
III																												
3.0		2.8	3.0	1.8	3.2	2.9	2.5	3.0	3.3	2.5	2.3	2.3	1.5	2.0	2.2	1.8	2.3	3.3	2.0	1.8	2.9	2.0	2.5	3.0	2.5	2.3	2.48	
IV																												
2.8		2.3	2.8	3.1	3.0	3.4	3.4	3.0	2.8	3.2	2.0	3.0	2.2	2.4	2.3	2.8	3.0	3.2	2.7	2.9	2.9	2.8	2.2	2.7	3.3	2.5	2.81	
Question Averages																												
2.3		2.3	2.2	2.3	2.5	2.7	2.6	2.5	2.8	2.7	2.0	2.7	1.6	2.0	2.2	2.1	2.3	2.8	2.4	2.2	2.6	2.4	2.4	2.7	2.5	2.1	2.37	

Possible response choices were:

1. quite well
2. moderately well
3. moderately poorly
4. quite poorly